

Response to Amendment and Argument

1. This communication is in response to applicant's 03/03/2008 Amendment in the application of Chao for the "System and method for transmitting a sequence of data blocks" filed 02/17/2004. This application is a continuation of 10/327,301 filed 12/20/2002 is now U.S. patent# 6,693,910 which claims benefit from provisional application of 60/392,403 filed 06/28/2002. The amendment and response has been entered and made of record. Claim 9 has been canceled per applicant's request, claims 1-8, 10-12 have been amended, and new claims 13-23 have been added. Claims 1-8, 10-23 are pending in the application.

2. Applicant's remarks and argument to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C. 103 as discussed below. Applicant's argument with respect to the pending claims have been fully considered, but they are not persuasive for at least the following reasons.

3. The Examiner emphasizes for the record that the claims employ a broader in scope than, those claims from the continued application in all aspects. The claim "enlarges the scope" of the patent claim(s) where the claim is broader than any claim of the patent. Such claims are considered to be broader in a way that attempts to reclaim what was surrendered earlier in the original application. In addition, the Applicant has not argued any narrower interpretation of the claim limitations, nor amended the claims significantly enough to construe a narrower meaning to the limitations. Since the claims breadth allows multiple interpretations and meanings, which

Art Unit: 2619

are broader than Applicant's disclosure, the Examiner is required to interpret the claim limitations in terms of their broadest reasonable interpretations while determining patentability of the disclosed invention. See MPEP 2111. In other words, the claims must be given their broadest reasonable interpretation consistent with the specification and the interpretation that those skilled in the art would reach. See *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000), *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999), and *In re American Academy of Science Tech Center*, 2004 WL 1067528 (Fed. Cir. May 13, 2004). Any term that is not clearly defined in the specification must be given its plain meaning as understood by one of ordinary skill in the art. See MPEP 2111.01. See also *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003), *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir. 2003). The interpretation of the claims by their broadest reasonable interpretation reduces the possibility that, once the claims are issued, the claims are interpreted more broadly than justified. See *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore, the failure to significantly narrow definition or scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims in parallel to the Applicant in the response and reiterates the need for the Applicant to distinctly define the claimed invention.

Election by Original Presentation

4. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-8, 10-12 drawn to the Sequencing or resequencing of packets to insure proper output sequence order: This subclass is indented under wherein information data to be switched is organized with one or more bytes preceded by an identification information indicative of a source or destination station. Subject matter wherein a rearrangement of packets order is performed before being outputted to ensure that the packets are outputted in the same order as the packets received by the network.

Classified in **class 370, subclass 394**.

II. Claims 13-23 drawn to the Particular storing and queuing arrangement:

This subclass is indented under subclass 428. Subject matter having a particular buffer processing arrangement for controlling the flow of information. Subject matter including facilities which permit (a) a storage of all or part of a message when no outgoing link to a destination is free and (b) a subsequent transmission to the destination when such a link becomes free. Classified in **class 370, subclass 429**.

5. Newly submitted claims 13-23 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single

combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I which has separate utility such as a scheduler for assigning each data block to the transmit processor that is released most recently from transmission, which does not include the particular listed of the invention II, such as receive processors for receiving a sequence of data blocks. See MPEP ' 806.05(d).

Since applicant has received an action on the merits for the originally presented invention (Claims 1-12 originally), this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 13-23 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

7. Claims 1, 3-6 and 7-8, 11-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Choi et al. (US#7,283,508).

With respect to claims 1, 3-6 and 7-8, 11-12, Choi et al. (US#7,283,508) discloses a method and system of transmitting a sequence data blocks, according to the essential features of the claims. Choi teaches in Fig. 8 a block diagram illustrated a structure of a MAC high speed layer in a general high speed downlink packet access (HSDPA) communication system includes

the transmit processor 803 for transmitting the sequence of data blocks, each data block including an identification of the transmit processor that transmits the data block; a scheduler 805 for assigning each data block to the transmit processor that is released most recently from transmission (Col. 8, lines 7 plus). Choi further teaches in Fig. 6 illustrates a structure of MAC-hs PDU transmitted over HS-PDSCH, in which the MAC-hs header 611 includes a transmission sequence number TSN used when MAC-hs SDU 613 is reordered in a priority queue (Fig. 1; Col. 3, lines 32 plus and Col. 6, lines 63 plus).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (US#7,283,508) in view of Connors et al. (US#2003/0103459).

With respect to claims 2, 10, the references disclose a novel system and method for reducing the latency in transmitting a sequence of data blocks, according to the essential features of the claims. Choi et al. (US#7,283,508) discloses the claimed limitations as discussed in the paragraph 7 above. These claim differ from claims above in that the claims require wherein the receiving an acknowledgement when a data block is transmitted without error, thereby releasing the corresponding transmit processor for transmission of the next data block. However, Choi

Art Unit: 2619

teaches a process of actually receiving data by a UE based on the control information transmitted over the HS-SCCH. A UE receives data transmitted over HS-PDSCH and demodulates the received data based on control information received over HS-SCCH. The UE determines an OVSF code with which it will receive and demodulate HS-PDSCH, based on the code info, and determines a modulation scheme based on the MS information. Thereafter, the UE determines whether the received data has an error, through a CRC operation. As a result of the determination, if no error has occurred in the receive data, the UE transmits an ACK signal, and if a error has occurred, the UE transmits a NACK signal. Actual user data transmitted over the HS-PDSCH will be defined as a "medium access control-high speed (MAC-hs) protocol data unit (PDU)" (Col. 6, lines 48 plus).

In the same field of endeavor, Connors et al. (US#2003/0103459) discloses in Fig. 4 a functional block diagram of an ARQ system that performs flow specific modified methods of selective-repeat ARQ, in which sender 402 includes a packet transmission mechanism 410, a cyclic redundancy check generation 412 (also referred to as the CRC generation 412), and an acknowledgement processing mechanism 414, while the receiver 406 includes a CRC inspection 416. The packet transmission mechanism 410 receives packets and classifies them according to the flow to which they belong. These packets will then be placed into memory at the sender 402 in such a way that they can be retrieved for transmission and potential re-transmission, for example, stored in a respective one of the outbound flow buffers 306 of Fig. 3. The methodology for managing the storing of packets for transmission is independent of the actual scheduling of transmission and re-transmission on the channel. When the time comes for transmission, the packet transmission mechanism 410 provides a means for sequential retrieval of packets

Art Unit: 2619

belonging to a particular flow that are being transmitted for the first time. The packet transmission mechanism 410 also provides a means for retrieval of packets belonging to a particular flow that are being re-transmitted. The order of these re-transmitted packets will be the order in which they arrived at the packet transmission mechanism 410. At transmission, the CRC generation 412 adds the error detection feature (e.g., a CRC sequence) to the packets for transmission. The packets are transmitted by the transceiver 404 over the forward channel 106 to the receiver 406. The packets are received by the transceiver 408 and forwarded to the CRC inspection 416 of the receiver 406. At the CRC inspection 416, a CRC check is performed. The result of the CRC check will generate an ACK, if the packet was received without error, or a NACK, if the packet was received with an error. This ACK/NACK information will be transmitted back to the sender 402 via the feedback channel 108. Positively acknowledged packets are forwarded out to be placed into the respective logical flows, for example, placed into a respective one of the inbound flow buffers 308 of Fig. 3. The acknowledgement processing mechanism 414 receives the acknowledgement information transmitted by the receiver 406 on the feedback channel 108 and with this information, discards and/or re-orders previously transmitted packets so as to accomplish selective-repeat ARQ. It also performs packet re-ordering with the number of previous transmit attempts values as input, discarding packets that would otherwise have been re-transmitted if it were not for the fact that they have expired their maximum number of transmit opportunities. In other words, packets that have exceeded the maximum number of transmit attempts, or time-to-live value, are discarded ([0032]-[0035]).

One skilled in the art would have recognized the need for effectively and efficiently facilitates H-ARQ processors for reducing the latency in transmitting sequence of data blocks, and would have applied Connors' method of automatic repeat request (ARQ) for a plurality of packets to be transmitted to a receiver into Choi's novel use of the MAC high speed controller. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Connors's method and implementation for a flow specific modified selective-repeat ARQ communication system into Choi et al.'s apparatus and method for transmitting/receiving serving HS-SCCH set information in a HSDPA communication system with the motivation being to provide a method and system for transmitting a sequence of data blocks.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Terry et al. (US#7,376,879) is cited to show the MAC architecture in wireless communication system supporting H-ARQ.

The Terry et al. (US#2006/0242529) show the medium access control high speed.

The Boucher et al. (US#6,393,487) is cited to show the passing a communication control block to a local device such that a message is processed on the device.

The Boucher et al. (US#7,284,070) show the TCP offload network interface device.

The Jiang (US#2003/0147348) show the stall avoidance schemes using HARQ process receiving status.

The Wu (US#2005/0073987) show the scheme to prevent HFN un synchronization for UM RLC in a high speed wireless communication system.

The Das et al. (US#7,133,688) show the method for improving uplink control channel efficiency in a wireless communication system.

The Philbrick et al. (US#2002/0095519) show the TCP/IP offload device with fast-path TCP ACK generating and transmitting mechanism.

The Sharp et al. (US#2004/0062245) show the TCP/IP offload device.

The Sipola (US#6,594,791) show the signaling method in an incremental redundancy communication system whereby data blocks can be combined.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the

Art Unit: 2619

examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

05/22/2008

/Man Phan/

Primary Examiner, Art Unit 2619